

ABSTRACT

An arithmetic unit detects difference α ($= X - Y$) between
a sound source arrival azimuth X° of a sound wave, which is
5 transmitted from a sound source buoy and is directly received
in a wave receiving buoy, to a reference axis of the wave receiving
buoy, and a target arrival azimuth Y° of a reflective sound,
which is reflected by a target, to the reference axis of the
wave receiving buoy. The arithmetic unit detects an azimuth angle
10 β of the sound source buoy on the basis of position information
(latitude and longitude) of the sound source buoy and wave
receiving buoy that is obtained by using GPS. Then, the
arithmetic unit detects the azimuth (target azimuth) of the target
to a magnetic north azimuth by the operation of $(\beta - \alpha)$.